III. REMARKS

A. Prior Office Actions Basis

Claims 1-4 are pending in the present Application. Claims 1, 3 and 4 were rejected by the Examiner under 35 U.S.C. Sec. 103(a) as being unpatentable over U.S. Patent No. 5,681,167 to Lazarof in view of U.S. Patent No. 6,142,782 to Lazarof. Further, Claim 2 was rejected by the Examiner under 35 U.S.C. Sec. 103(a) as being unpatentable over U.S. Patent No. 5,681,167 to Lazarof in view of U.S. Patent No. 6,142,782 to Lazarof as applied to Claim 1 above, and further in view of U.S. Patent Publication No. 2003/0087217 to Coatoam. Finally, the drawings were objected to because of poor line quality.

B. Amendment Overview

By this Amendment, the Specification has been amended on pages 3, 4, 5, 6, 7, and 8. The Abstract has been amended on page 11. The amended Specification on pages 3, 4, 5, 6, 7 and 8 and the amended Abstract on page 11 are presented in a marked-up version herein in accordance with 37 C.F.R. Sec. 1.121 as revised on July 30, 2003. Claims 1-4 have been cancelled. New Claims 5-20 have been added to overcome the rejections based upon 35 U.S.C. Sec. 103(a). All of the claims have been presented in accordance with 37 C.F.R. Sec. 1.121 as revised on July 30, 2003 and the required claim listing is included herewith. Drawing Figs. 1, 2, 4, 4A, 5, 5A, 6 and 7 have been amended and are presented herein as "Replacement Sheets 1-3" in formal drawing format. New Fig. 8 has been added. Arguments in favor of allowance of new Claims 5-20 are also included. The content of the new Claims have been drawn from the Specification and drawings Figs. as originally filed. Amendments to the Specification have been drawn from the Specification and drawing Figs. as originally filed. Amendments to the Drawing Figs. have been drawn from the Specification and drawing Figs. as originally filed. New matter as described in 35 U.S.C. §132 has not been added to the Specification. The proposed changes should not, therefore, be objectionable. Accordingly, entry of these changes is hereby respectfully requested.

C. Amendments to the Specification

Amendments to the Specification as originally filed in marked-up form are included with this Amendment "A".

1. The amendment to the paragraph on Specification page 3, line 14 to page 4, line 3 deletes the number "15" after the word "hood" at page 3, line 14 in the Summary of the Invention. The term "patient's mouth" at page 3, line 15 has been changed to - - patient's jawbone - - since the oral cavity is in the jawbone. The term "a head" at page 3, line 17 has been changed to - - a slotted head - -. The term "draw screw head" at page 3, line 19 (two occurrences) has been changed to - - draw screw slotted head - - to more clearly identify the component structure.

2. The Amendment to the paragraph on Specification page 4, lines 4-5 includes a comma - - , - - after the word "invention" on page 4, line 4.

3. The Amendment to the paragraph on Specification page 4, lines 8-9 replaces the word "said" at page 4, line 9 with the word - - the - - since the word "said" is only appropriate in claim construction.

4. The Amendment to the paragraph on Specification page 4, lines 10-12 replaces the incorrectly spelled word "permanantly" at page 4, line 10 with - - permanently - -, and replaces the term "upper hex portion" at page 4, line 11 with the correct term - - upper hex collar - - to maintain consistency with the Detailed Description.

5. The amendment to the paragraph on Specification page 4, lines 15-16 changes the term "Figure 1" to the correct term - - Fig. 1 - -, and further notes that Fig. 1 is a view of the inventive Bipolar Implant.

6. The amendment to the paragraph on Specification page 4, lines 17-20 changes the term "Figure 2" to the correct term - - Fig. 2 - -, changes the term "figure 1" to the correct term - - Fig. 1 - -, deletes the word "dental" to recite the correct name of the invention (bipolar implant) as set out on page 1, line 1 of the Specification as filed, and identifies that the cross-sectional view of Fig. 2 is taken along - - line 2-2 of Fig. 1 - -.

7. The amendment to the paragraph on Specification page 4, lines 21-22 changes the terms "Figure 3" and "figure 1" to the correct terms - - Fig. 3 - - and - - Fig. 1 - -, respectively, and also deletes the word "dental" to recite the correct name of the invention (bipolar implant) as set out on page 1, line 1 of the Specification, as filed.

8. The amendment to the paragraph on Specification page 5, lines 1-3 changes the term "Figure 4" to the correct term - - Fig. 4 - -, and deletes the word "dental" to recite the correct name of the invention (bipolar implant) as set out on page 1, line 1 of the Specification, as filed.

9. The amendment to the paragraph on Specification page 5, lines 4-5 changes the term "Figure 4A" to the correct term - - Fig. 4A - -, and deletes the word "dental" to recite the correct name of the invention (bipolar implant) as set out on page 1, line 1 of the Specification, as filed.

10. The amendment to the paragraph on Specification page 5, lines 6-7 changes the terms "Figure 5" and "figure 4" to the correct terms - - Fig. 5 - - and - - Fig. 4 - -, respectively, and also changes the phrase "bipolar dental implant" to recite - - the bipolar implant - - to reflect the correct name of the invention as set out on page 1, line 1 of the Specification, as filed.

11. The amendment to the paragraph on Specification page 5, lines 8-10 changes the terms "Figure 5A" and "figure 4A" to the correct terms - - Fig. 5A - - and - - Fig. 4A - -, respectively, and also deletes the word "dental" to recite the correct name of the invention (bipolar implant) as set out on page 1, line 1 of the Specification, as filed.

12. The amendment to the paragraph on Specification page 5, lines 11-13 changes the terms "Figure 6" and "figure 4" to the correct terms - - Fig. 6 - - and - - Fig. 4 - -, respectively, and also deletes the word "dental" to recite the correct name of the invention (bipolar implant) as set out on page 1, line 1 of the Specification, as filed.

13. The amendment to the paragraph on Specification page 5, lines 14-17 changes the terms "Figure 7", and "figure 1", and "figure 4" to the correct terms - - Fig. 7 - -, and - - Fig. 1 - -, and - - Fig. 4 - -, respectively, and also deletes the word "dental" to recite the correct name of the invention (bipolar implant) as set out on page 1, line 1 of the Specification, as filed.

14. The amendment to the Specification on page 5, after line 17 but before line 18 adds the description of new Fig. 8 as a frontal view of the bipolar implant of Fig. 1 showing the implant assembly 18 mounted within a cavity 28 of the jawbone 27 of a patient and illustrating a plurality of bone engaging protuberances 24, a continuously tapered portion 30, and an abutment 6 for mounting a prosthetic component thereon.

Reference to the implant assembly 18 being mounted within the jawbone 27 of a patient appears at Specification page 8, line 4 of the Specification as originally filed.

15. The amendment to the paragraph on Specification page 5, lines 19-22 changes the line " ... a dental implant." to - - a bipolar implant such as, for example, a bipolar dental implant. - - to more clearly define that the invention is a bipolar implant (as recited on page 1, line 1 of the specification, as filed), and that an example embodiment is a bipolar dental implant.

16. The amendment to the paragraph on Specification page 6, lines 1-11 beginning with line 1 changes the mid-sentence phrase "The implant assembly" to - - an implant assembly 18 - - which originally appears on page 8, line 4 of the Specification, as filed. The term "hood" is amended to recite - - hood 1 - - on page 6, lines 3 and 9. The words "cavity" and "bone" at Specification page 6, line 4 have been amended to - - cavity 28 - - and - - jawbone 27 - - for identification clarification (see page 8, line 4 of the Specification, as filed). Further, the terms "upper hood" at page 6, line 5 and "beveled coronal rings" at page 6, lines 5-6 now recite their previously assigned identification numbers - - upper hood 21 - - (see Specification page 6, line 2) and - - beveled coronal rings 20 - - (see Specification page 6, line 5). On Specification page 6, line 6, the term "implant" has been amended to recite - - implant assembly 18 - - to be consistent with the corresponding term at page 6, line 1 and at page 8, line 4, as filed. On Specification line 6, line 8 after the word "circumference", it is noted that - - A prosthetic component 25 such as, for example, an artificial tooth can be attached to the abutment 6 as shown in phantom in Fig. 1. - - The prosthetic component is referred to at Specification page 3, line 6, Specification page 4, line 16, and Specification page 5, line 21, and is clearly shown in Fig. 1 (in phantom) and has been assigned the identification number - - 25 - -. Also, the previously introduced term "an abutment 6" (see Specification page 6, lines 6-7) has been changed to - - the abutment 6 - - at Specification page 6, lines 9-10 with a reference to drawing Figs. 1-2, as filed. Additionally, at Specification page 6, lines 9-10, the term "In an alternative embodiment of the invention" has been changed to - - Alternately, - -.

17. A further amendment to the paragraph on Specification page 6, lines 1-11 occurs after the phrase "extraction of a tooth" on page 6, line 4. A sentence is added that explains what is clearly shown in Figs. 1, 2, 4, 4A and 7, as filed, and expands on what is recited at page 3, lines 2-7 and at page 6, lines 3-4 of the Specification, as filed. The

text at page 3, lines 2-7, as filed, explains that the cavity in the patient's jawbone after the extraction of a tooth has a natural tapered shape and is wider at the gum line proximal to the cavity opening. The text at page 6, lines 3-4, as filed, recites that the tapered shape of the hood 1 of the implant assembly 18 better accommodates the shape of the cavity 28 within the jawbone 27 of the patient that results from the extraction of the tooth. In furtherance to these statements appearing in the Specification as originally filed, the amendment beginning at page 6, line 4, as filed, points out that the implant assembly 18 includes a continuously tapered portion 30 that extends from the upper hood 21 through the lower hood 19 and along the tapered tubular body 3 (see Specification page 7, line 8, as filed) to the skirt portion 2. This continuously tapered portion 30 of the implant assembly 18 better accommodates the natural tapered shape of the cavity within the patient's jawbone 27 resulting from the extraction of a tooth. The continuously tapered portion 30 is clearly shown in Applicant's drawing Figs. 1, 2, 4, 4A, 7 and 8, as filed.

18. The amendment to the paragraph on Specification page 6, lines 12-16 adds previously assigned identification numbers - - tubular body 3 - - (two occurrences) for clarity. The term "a tubular body 3" appearing on Specification page 6, line 12 now recites - - the tubular body 3 - - having been previously recited on Specification page 6, lines 1-11. The "bone engaging protrusions 24" are now identified as appearing in Fig. 2. The term "internal threads 5" is now more clearly identified as - - the internal abutment threads 5 - - as originally recited on Specification page 6, line 8. Also, the term "an abutment 6" at Specification page 6, line 16 now recites - - the abutment 6 - - having been previously recited at Specification page 6, lines 6-7.

19. The amendment to the paragraph on Specification page 6, line 17 to page 7, line 2 changes the term "a skirt portion 2" appearing on page 6, line 17 to - - the skirt portion 2 - - having been previously recited on Specification page 6, lines 1-11. This amendment also deletes the number "155" appearing on Specification page 6, line 17, adds a comma - - , - - after "As shown in FIGS. 2 and 7", and changes "a head of a draw screw 22 rests." to - - a slotted head 22 of the draw screw 8 rests. - -. These amendments are consistent with the previously assigned identification numbers (see Specification page 6, line 20 and page 7, line 12).

20 The amendment to the paragraph on Specification page 7, lines 3-6 adds the identification number - - 27 - - after the word "jawbone" on Specification page 7, line 6 for clarification.

21. The amendment to the paragraph on Specification page 7 , lines 7-15 adds the phrase - - of the tubular body 3 - - after "the internal shoulder 13" on page 7, line 13, and amends "the head 22 and the shoulder 13," to - - the slotted head 22 and the internal shoulder 13 - - on page 7, line 15 to add clarity to the description. The "slotted head 22" is initially found in the Specification on page 7, line 12 and the internal shoulder 13 is initially found on Specification page 6, line 21, as filed.

22. The amendment to the paragraph on Specification page 7, line 16 to Specification page 8, line 3 amends the phrase "within the bore of the patient" to - - within the bore of the patient's jawbone 27 - - for clarification, where - - jawbone - - originally appears on Specification page 8, line 4. Further, the descriptive phrase - - as shown in Figs. 2 and 3 - - is added on page 8, line 3 to further clarify the operation of the expansion nut 4 relative to the tubular body 3.

23. The amendment to the paragraph on Specification page 8, lines 4-17 adds the identification number - - 27 - - after the word "jawbone" and makes reference to Fig. 8 at Specification page 8, lines 4, amends the phrase "the head 84" at page 8, line 3 to - - the slotted head 22 - - which originally appears at Specification page 7, line 12. Further, the phrases - - as shown in Fig. 1 - - and - - as shown in Fig. 2 - - have been added after "tapered slits 17" and after "expansion nut 4" (see Specification page 8, line 9), respectively, to assist the reader's understanding of the structural combination. On Specification page 8, lines 10 and 17, the phrase - - of the patient's jawbone 27 - - is added after the word "bore" and the phrase "a patient's mouth" has been amended to recite - - the patient's jawbone 27 - - to assure consistency in the description at Specification page 8, line 4.

24. The amendment to the paragraph on Specification page 8, lines 18-21 adds the previously assigned identification number - - 1 - - after the term "hood" at page 8, lines 19-20 (three occurrences). The term "hood 1" originally appears on Specification page 6, line 2, as filed.

25. The amendment to the paragraph on Specification page 8, lines 18-21 recites the identification numbers of the remaining components shown in Figs. 4A and 5A,

as filed, which include those corresponding components appearing in Figs. 1-7, as filed. The identification numbers now shown in amended drawing Figs. 4A and 5A were inadvertently omitted when the pending application was initially filed. Those components include the skirt portion 2 (appearing on page 6, line 17, as filed), upper hex collar 9 (appearing on page 6, line 6, as filed), bone anchor segments 11 (appearing on page 7, line 18, as filed), spaced tapered slits 17 (appearing on page 7, line 17, as filed), lower hood 19 (appearing on page 6, line 2, as filed), beveled coronal rings 20 (appearing on page 6, line 5, as filed), upper hood 21 (appearing on page 6, line 2, as filed), bone engaging protrusions 24 (appearing on page 6, lines 13-14, as filed), and continuously tapered portion 30 (appearing on page 6, line 7, as amended).

26. The amendment to the Abstract paragraph on Specification page 11, lines 2-5 changes the phrase "concerns an implant" at page 11, line 4 to - - concerns a bipolar implant - - to reflect the title of the invention. Further, at page 11, line 5, the phrase "within the bone of the patient." has been amended to recite - - within the jawbone of a patient. - -. The term - - jawbone - - originally appears on Specification page 8, line 4, as filed.

D. Amendments to the Drawing Figs.

1. The drawing Figs. filed on October 3, 2003 have been objected to by the Examiner because the drawing lines are of poor quality.

2. Formal drawings are being submitted as "Replacement Sheets" with this Amendment "A" to overcome the Examiner's objection to the drawing Figs. as originally filed.

3. Drawing Figs. 1, 2, 4, 4A, 5, 5A, 6 and 7 have been amended to add identification numbers and cross-section line numbers to assist in understanding the invention. The identification numbers and cross-section line numbers added to the amended pending drawing Figs. appeared in or were alluded to in the pending application as originally filed. New matter as defined in 35 U.S.C. Sec. 132 has not been added to the drawing Figs. New Fig. 8 has been added.

4. In Fig. 1, the identification numbers added include: 10 for tabs; 17 for spaced tapered slits; 18 for implant assembly; 25 for prosthetic component; 30 for

continuously tapered portion and cross-section line numbers 2-2. Tab 10 originally appeared in Fig. 3 and at page 8, line 1, as filed. Tapered slits 17 originally appeared in Fig. 4 and at page 7, line 17, as filed. Implant assembly 18 originally appeared in Fig. 4 and at page 8, line 5, as filed. Prosthetic component 25 is clearly shown in Fig. 1, as filed, and referred to on Specification page 5, line 21. Continuously tapered portion 30 is clearly shown in Figs. 1, 2, 4, 4A, and 7, as filed, and referred to at Specification page 3, lines 2-7 and Specification page 6, lines 3-4, as filed. Reference to cross section line numbers 2-2 originally appeared at page 4, line 18.

5. In Fig. 2, the identification numbers added include: 3 for tapered body; 10 for tabs; 18 for implant assembly; and 30 for continuously tapered portion. Tapered body 3 originally appeared in Fig. 1 and at page 6, line 12, as filed. Tab 10 originally appeared in Fig. 3 and at page 8, line 1, as filed. Implant assembly 18 originally appeared in Fig. 4 and at page 8, line 4 as filed. Continuously tapered portion 30 is clearly shown in Figs. 1, 2, 4, 4A, and 7, as filed, and referred to at Specification page 3, lines 2-7 and Specification page 6, lines 3-4, as filed.

6. In Fig. 4, the identification numbers added include: 1 for hood; 2 for skirt section; 18 for implant assembly (re-oriented); 30 for continuously tapered portion; and cross-section line 7-7. Hood 1 originally appeared in Fig. 1 and on page 6, line 1, as filed. Skirt portion 2 originally appeared in Fig. 1 and at page 6, line 17, as filed. Implant assembly 18 originally appeared in Fig. 4 and at page 8, line 5, as filed. Continuously tapered portion 30 is clearly shown in Figs. 1, 2, 4, 4A, and 7, as filed, and referred to at Specification page 3, lines 2-7 and Specification page 6, lines 3-4, as filed. Reference to cross-section line numbers 7-7 originally appeared at page 5, line 15, as filed.

7. In Fig. 4A, the identification numbers added include: 2 for skirt portion; 3 for tapered body; 19 for lower hood; 21 for upper hood; and 30 for continuously tapered portion. Skirt portion 2 originally appeared in Fig. 1 and at page 6, line 17, as filed. Tapered body 3 originally appeared in Fig. 1 and at page 6, line 12, as filed. Lower hood 19 originally appeared in Fig. 1 and at page 6, line 2, as filed. Upper hood 21 originally appeared in Fig. 1 and at page 6, line 2, as filed. Continuously tapered portion 30 is clearly shown in Figs. 1, 2, 4, 4A, and 7, as filed, and referred to at Specification page 3, lines 2-7 and Specification page 6, lines 3-4, as filed.

8. In Fig. 5, the identification number added includes: 9 for upper hex collar. Upper hex collar 9 originally appeared in Fig. 1 and at page 6, line 6, as filed.

9. In Fig. 5A, the identification numbers added include: 9 for upper hex collar; 20 for beveled coronal rings and 21 for upper hood. Upper hex collar 9 originally appeared in Fig. 1 and at page 6, line 6, as filed. Beveled coronal rings 20 originally appeared in Fig. 1 and at page 6, line 5, as filed. Upper hood 21 originally appeared in Fig. 1 and at page 6, line 2, as filed.

10. In Fig. 6, the identification numbers added include: 2 for skirt portion; 11 for bone anchor segments; 12 for bone penetrating protuberances; and 17 for spaced tapered slits. Skirt portion 2 originally appeared in Fig. 1 and at page 6, line 17, as filed. Bone anchor segments 11 originally appeared in Fig. 1 and at page 7, line 18. Bone penetrating protuberances 12 originally appeared in Fig. 1 and at page 7, line 19. Spaced tapered slits 17 originally appeared in Fig. 4 and at page 7, line 17.

11. In Fig. 7, the identification numbers added include: 3 for tubular body; 7 for threaded shank portion; and 30 for continuously tapered portion. Tubular body 3 originally appeared in Fig. 1 and at page 6, line 12, as filed. Threaded shank portion 7 originally appeared in Fig. 2 and at page 6, line 22, as filed. Continuously tapered portion 30 is clearly shown in Figs. 1, 2, 4, 4A and 7, as filed, and referred to at Specification page 3, lines 2-7 and Specification page 6, lines 3-4, as filed.

12. New Fig. 8 shows a frontal view of the bipolar implant of Fig. 1 specifically illustrating the implant assembly 18 mounted within a cavity 28 of the jawbone 27 of a patient and illustrating a plurality of bone engaging protuberances 24, a continuously tapered portion 30, and an abutment 6 for mounting a prosthetic component 25 (shown in Fig. 1) thereon. The tapered shape of the continuously tapered portion 30 of the implant assembly 18 corresponds to the natural tapered shape of a cavity 28 in the jawbone 27 of the patient resulting from the extraction of a tooth. New Fig. 8 clearly shows the novel combination of the continuously tapered portion 30 with the bone engaging protuberances 24 of the implant assembly 18. Reference to the implant assembly 18 being mounted within the jawbone 27 of a patient appears at Specification page 8, line 4 of the Specification as originally filed. The identification numbers on new Fig. 8 include: hood 1 originally appeared in Fig. 1, as filed, and at Specification page 6, line 2, as filed; abutment 6 originally appeared in Fig. 1, as filed, and on Specification page

6, lines 6-7, as filed; upper hex collar 9 originally appeared on Fig. 1, as filed, and on Specification page 6, line 6, as filed; implant assembly 18 originally appeared on Fig. 4, as filed, and on Specification page 8, line 4, as filed; bone engaging protuberances 24 originally appeared on Fig. 2, as filed, and on Specification page 6, lines 13-14, as filed; jawbone 27 originally appeared on Specification page 6, line 6 (as amended); cavity 28 originally appeared on Specification page 6, line 6 (as amended); and continuously tapered portion 30 was clearly shown in Figs. 1, 2, 4, 4A and 7, as filed, and referred to at Specification page 3, lines 2-7 and Specification page 6, lines 3-4, as filed.

13. Thus, the amendments to the pending drawing Figs. 1, 2, 4, 4A, 5, 5A, 6 and 7 and new Fig. 8 are drawn from the drawing Figs. and the Specification as originally filed and thus do not constitute new matter. The Examiner is respectfully requested to withdraw his objection to the drawing Figs. and to make the accompanying formal drawing Figs. of record.

E. Invention as Presently Claimed is Patentable

Applicants' invention is directed to a bipolar implant for use in implanting into a patient's jawbone after tooth extraction. The bipolar implant compacts bone bi-directionally, resulting in an improved, more stable implant. The natural configuration of a cavity of an extracted tooth tapers and expands outwardly towards the gum line. The invention improves the stability of the implant and addresses the configuration of a natural cavity after tooth removal. In the preferred embodiment of the invention, the implant assembly 18 has a hood 1 that tapers outward, in the direction of the oral cavity of the patient's jawbone. Adjacent to the tapered hood 1, is a tapered, tubular body 3 that includes a skirt portion 2 receivable within a bore provided in the jawbone of a patient. In order to better accommodate the natural tapered shape of the resulting cavity within the patient's jawbone, the implant assembly 18 includes a continuously tapered portion 30 extending from an upper hood 21 through a lower hood 19 and along the tapered tubular body 3 to the skirt portion 2. Within the tapered tubular body 3 is a draw screw 8 having a slotted head 22 which is captured within a hollow body, and a threaded shank 7 which is connected to the slotted head 22 of the draw screw 8 and extends to an end of the skirt 2. The slotted head 22 of the draw screw 8 engages an internal shoulder 13 contained within the tapered hollow body to form a seal which isolates a first hollow body chamber 15 on one side of the slotted head 22 of the draw screw 8 from a second hollow body chamber 16 on an opposite side thereof. An expansion nut 4 has an inner threaded cavity into which the threaded shank 7 of the draw screw 8 is threaded. Rotation of the draw screw 8 through the inner cavity of the expansion nut 4 causes radial movement of the skirt portion 2 from a first retracted position to a second expanded position. In an alternative embodiment of the invention, the tapered hood 1 has a portion removed so that the resulting circumference around the hood 1 is non-circular. In another embodiment of the invention, the tapered hood 1 is adjacent to beveled coronal rings 20, which are attached to an upper hex collar 9. In another embodiment of the invention, the tapered hood 1 is adjacent to an upper hex collar 9 where the hex collar 9 has a circumference that is equal to the largest circumference of the tapered hood 1. Finally, in an alternative embodiment of the invention, an abutment 6 is permanently integrated into the upper hex collar 9 of the implant by machining, thus eliminating the need for attaching a separate abutment.

This advantageous design is defined in the present Specification and set forth in claims of varying scope, for example new Claim 5 recites:

> 5. An implant assembly comprising:
>
> a tapered hood;
>
> a tapered tubular body adjacent to said tapered hood and including a skirt portion, said tapered hood, tapered tubular body and skirt portion forming a continuously tapered portion receivable within a naturally tapered cavity in a patient's jawbone after a tooth extraction;
>
> bone engaging means formed along said tapered tubular body of said continuously tapered portion and on a plurality of movable bone anchor segments of said skirt portion, said bone engaging means for slicing into said tapered cavity for securing said tapered tubular body in said jawbone; and

> a draw screw having a threaded shank positioned within said tapered tubular body and cooperating with an expansion nut wherein rotation of said draw screw draws said expansion nut upward into said tapered tubular body for forcing said bone engaging means into said jawbone for securely locking said tapered tubular body in position. (Emphasis added.)

F. Argument

1. Lazarof '167 in view of Lazarof '782 - 35 U.S.C. Sec. 103(a)

a. Claims 1, 3 and 4 were rejected under 35 U.S.C. Sec. 103(a) by the Examiner as being unpatentable over U.S. Patent No. 5,681,167 to Lazarof in view of U.S. Patent No. 6,142,782 to Lazarof.

b. The Examiner argued with regard to Applicant's pending Claim 1 that Lazarof '167 shows a hood comprising an upper hood shown at 90 and a lower hood shown immediately below the upper hood and extending out toward the upper hood, a hollow tubular body with a skirt as shown, internal shoulder 72, draw screw 70 with head 74, threaded shank 76 and expansion nut 68 with a threaded cavity as shown. The Examiner further argues that while Lazarof '167 shows head 74 mating with shoulder 72, the '167 reference does not show or specifically state that this connection forms a seal. The Examiner then argued that Lazarof '782 teaches a seal between the draw screw 80 and shoulder 82 referring to column 7, lines 42-60. The Examiner further argued with regard to Applicant's pending Claim 3 that Lazarof '167 shows a beveled ring 96 and a multi-sided collar 92. Finally, the Examiner argued with regard to Applicant's pending Claim 4 that Lazarof '167 shows that the hood at 94 that is adjacent to multi-sided collar 92 has the largest circumference of the hood as shown.

c. The Examiner then concluded with regard to Applicant's pending Claim 1 that it would be obvious to one of ordinary skill in the art to modify Lazarof '167 to include a seal as shown by Lazarof '782 in order to contain contamination. The Examiner further concluded with regard to Applicant's pending Claim 3 that use of a set of beveled rings 96 and the multi-sided collar 92 is merely an obvious matter of choice in the number of a known element used for a known purpose. Finally, the Examiner concluded with regard to Applicant's pending Claim 4, Lazarof '167 shows that the hood at 94 that is adjacent to the multi-sided collar 92 has the largest circumference of the hood.

d. Lazarof '167 discloses a dental assembly including an implant having a tubular body portion which can be positively secured within a bore in a jawbone by an expander mechanism, and a two-piece abutment secured to the implant and having a collar which is incapable of rotation with respect thereto. Lazarof '167 also discloses that in a related process for preparing a tooth prosthesis, a transfer sleeve is utilized in a process to replicate conditions in the mouth, including the configuration of the abutment assembly, in manufacturing a custom analog. Lazarof '167 also discloses that a custom analog is cast into a stone mold to provide an exact duplicate of the mouth and from this stone mold, a crown can be manufactured in a laboratory to precisely fit in the user's mouth over a customized abutment. Finally, Lazarof '167 discloses that a treatment crown sleeve may be utilized in connection with a provisional tooth.

e. Lazarof '782 discloses an implant assembly including an elongated hollow body having a skirt which can be positively secured within a bore in a bone of a patient by an expander mechanism, and an abutment which extends from the skirt outwardly from the bore for supporting a prosthetic component. Lazarof '782 also discloses that optionally, an abutment post may be provided which has a head position adjacent to the abutment and a shank received within the hollow body. Lazarof '782 also discloses that in a related process for preparing the prosthesis, a transfer component is utilized to replicate the body portion surrounding the implant to facilitate manufacturing the prosthetic component. Lazarof '782 also discloses that in this regard, an impression is taken over the abutment with the associated transfer component, and an implant analog having the transfer component associated therewith is inserted into the impression. Finally, Lazarof '782 discloses that a stone mold is created utilizing the impression having the inserted implant analog, which stone mold is utilized to form the prosthesis.

f. Neither Lazarof '167 nor Lazarof '782 individually or in combination teach, disclose or suggest

> An implant assembly comprising ... (1) a tapered hood, in combination with (2) a tapered tubular body adjacent to said tapered hood and including a skirt portion, said tapered hood, tapered tubular body and skirt portion

> forming a continuously tapered portion receivable within a naturally tapered cavity in a patient's jawbone after a tooth extraction, and (3) bone engaging means formed along said tapered tubular body of said continuously tapered portion and on a plurality of moveable bone anchor segments of said skirt portion, said bone engaging means for slicing into said tapered cavity for securing said tapered tubular body in said jawbone

g. Applicant's new independent Claims 5 and 18 include (1) a tapered hood 1, in combination with (2) a tapered tubular body 3 adjacent to the tapered hood 1 and including a skirt portion 2, where (3) the tapered hood 1, tapered tubular body 3 and skirt portion 2 form a continuously tapered portion 30 receivable within a naturally tapered cavity 28 in a patient's jawbone 27, and (4) bone engaging means 12, 24 formed along the tapered tubular body 3 of the continuously tapered portion 30 and on a plurality of movable bone anchor segments 11 of the skirt portion 2, where (5) the bone engaging means 12, 24 are employed for slicing into the tapered cavity 28 for securing the tapered tubular body 3 in the jawbone 27. In Applicant's new independent Claim 17, bone engaging means formed along the tapered tubular body 3 and skirt portion 2 of the continuously tapered portion 30 is further identified as a plurality of bone engaging protrusions 24 and a plurality of bone penetrating protuberances 12.

h. Each of these features recited in the immediately preceding paragraph is shown and disclosed in Applicant's amended application {in substitute specification filed under 37 C.F.R. Sec. 1.125 on March 05, 2004 via U.S. Express Mail Post Office to Addressee (U.S. Express Mail Label No. EV 261280769 US) in response to the Notice To File Missing Parts Of Non-Provisional Application (filed under 37 C.F.R. Sec. 1.53(b)) and mailed from the U.S. Patent & Trademark Office on January 05, 2004} at: tapered hood 1 in Figs. 1, 4 and 4A and at specification page 6, line 1, as filed; tapered tubular body 3 in Figs. 1, 2, 4, 4A, and 7 and specification page 6, line 12 and page 7, line 8, as filed; skirt portion 2 in Figs. 1, 2, 4, 4A, and 6 and at specification page 6, line 17, as filed; continuously tapered portion 30 in Figs. 1, 2, 4, 4A, 7, as filed, and in new Fig. 8, and at specification page 6, line 7, as amended; tapered cavity 28 and jawbone 27 are shown in new Fig. 8, and recited on specification page 6, line 4 and page 7, line 6, as filed; bone engaging means including the plurality of bone engaging protrusions 24 are shown in Fig. 2 and at specification page 6, lines 13-14, as filed, and the plurality of bone penetrating protuberances 12 are shown in Figs. 1, 2 and 4 and at specification page 7, line 19, as filed; and the plurality of movable bone anchor segments 11 are shown in Figs. 1, 4, 4A, and 6 and at specification page 7, line 18, as filed.

i. Lazarof '167 in view of Lazarof '782 totally fail to teach, disclose or suggest these features, in combination, which are recited in Applicants' new independent Claims 5, 17 and 18.

(1) In particular, Lazarof '167 discloses a dental assembly and process for preparing a tooth prosthesis, the mechanical construction of which is clearly shown in Figs. 2 - 4 of drawing sheets 2 of 15 and 3 of 15. The component in the Lazarof '167 that is comparable to the implant assembly 18 of the present invention is a dental implant 50 best shown in the exploded view of Fig. 2 in Lazarof '167. As is clearly shown in Fig. 2 of Lazarof '167, the component that is comparable to the tapered hood 1 of the present invention is a cylindrical ring 90. The cylindrical ring 90 of Lazarof '167 is clearly not tapered. At column 7 beginning with line 18, Lazarof '167 discloses that when the dental implant 50 is properly positioned within the jawbone 60 of the patient as illustrated in Fig. 26, an upper portion of the dental implant extends upwardly from the jawbone. Lazarof '167 then discloses that this upper portion includes a cylindrical ring 90 having a diameter generally slightly larger than the diameter of the bore 58, and an uppermost, exteriorly hexagonal portion 92.

(2) Likewise, Lazarof '782 discloses an implant assembly and process for preparing a prosthetic device, the construction being disclosed in Fig.2 thereof. The component of Lazarof '782 that is comparable to the implant assembly 18 of the present invention is an implant assembly 60 clearly shown in Fig. 2 of Lazarof '782.
The component in Lazarof '782 that is comparable to the tapered hood 1 of the present invention is the cylindrical ring 110 shown in Fig. 2 of Lazarof '782. The cylindrical ring 110 of Lazarof '782 is clearly shown to be cylindrical, not tapered. Further, at column 8, beginning with line 12, Lazarof '782 discloses that the abutment 108 includes a cylindrical ring 110 having a diameter generally slightly larger than the diameter of the bore 66, and an uppermost, exteriorly hexagonal collar portion 112. Thus, neither the cylindrical ring 90 of Lazarof '167 nor the cylindrical ring 110 of Lazarof '782 discloses a tapered hood as is clearly shown and described in Applicant's new independent Claims 5, 17 and 18.

(3) Lazarof '167 also discloses a dental implant tubular body 56 and a skirt portion 66 shown in Fig. 2 thereof. The tubular body 56 of Lazarof '167 is

clearly shown as being cylindrical, not tapered. The tubular body 56 and skirt portion 66 are discussed in the Lazarof '167 disclosure at column 6 beginning at line 53 to column 7, line 17, and nowhere are these components described as being tapered. Consequently, as shown in the exploded view of Fig. 2 and described, Lazarof '167 does not disclose a tapered hood, tapered tubular body and skirt portion that forms a continuously tapered portion which is designed to be received within a naturally tapered cavity in a patient's jawbone as is recited in Applicant's new independent Claims 5, 17 and 18.

(4) Lazarof '782 also discloses an elongated hollow body 64 and a skirt portion 76 clearly shown in Fig. 2 thereof. The elongated hollow body 64 of Lazarof '782 (as with the tubular body 56 of Lazarof '167) is clearly shown to be cylindrical, not tapered. The elongated hollow body 64 and skirt portion 76 are discussed in the Lazarof '782 disclosure beginning at column 7, line 13 through column 8, line 41, and nowhere are these components described as being tapered. Consequently, as shown in Fig. 2 and described, neither Lazarof '782 nor Lazarof '167 discloses a tapered hood, tapered tubular body and skirt portion that forms a continuously tapered portion which is designed to be received within a naturally tapered cavity in a patient's jawbone as is recited in Applicant's new independent Claims 5, 17 and 18.

(5) Lazarof '167 discloses a plurality of bone penetrating protuberances 86 formed along the cylindrical, elongated tubular body 56 and cylindrical skirt portion 66 as is clearly shown in the exploded view of Fig. 2 thereof. As disclosed in column 7 beginning with line 4 of Lazarof '167, the skirt portion 66 of the tubular body 56 is provided with four circumferentially spaced elongated slits 82 which define four separately-movable bone anchor segments 84 each having a bone penetrating means provided in the form of ... bone penetrating protuberances 86. The bone penetrating protuberances 86 are formed on the exterior surface of the cylindrical, elongated tubular body 56 and skirt portion 66 as clearly shown in Fig. 2 of Lazarof '167. Consequently, as shown in Fig. 2 and described, Lazarof '167 does not disclose bone engaging means including bone engaging protrusions formed along the tapered tubular body of the continuously tapered portion and bone penetrating protuberances formed on the moveable bone anchor segments of the skirt portion for slicing into the tapered cavity for securing the tapered tubular body in the jawbone as recited in Applicant's new independent Claims 5, 17 and 18.

(6) Lazarof '782 also discloses a plurality of bone penetrating protuberances 104 formed along the cylindrical, elongated tubular body 64 and cylindrical skirt portion 76 as is clearly shown in Fig. 2 thereof (as in Lazarof '167). As disclosed in column 7, lines 61-67 of Lazarof '782, the skirt portion 76 of the tubular body 64 is also provided with four circumferentially spaced elongated slits 100 which define four separately-movable bone anchor segments 102 each having ... a series of bone penetrating protuberances 104 formed on the exterior surface of the cylindrical, elongated tubular body 64 and cylindrical skirt portion 76. Consequently, as shown in Fig. 2 and described, neither Lazarof '782 nor Lazarof '167 discloses bone engaging means including bone engaging protrusions formed along the tapered tubular body of the continuously tapered portion and bone penetrating protuberances formed on the moveable bone anchor segments of the skirt portion for slicing into the tapered cavity for securing the tapered tubular body in the jawbone as recited in Applicant's new independent Claims 5, 17 and 18.

j. It is the continuously tapered portion 30 (comprised of the tapered hood 1, tapered tubular body 3 and skirt portion 2) with the bone engaging means (i.e., the bone engaging protrusions 24 formed along the tapered tubular body 3 of the continuously tapered portion 30 and the bone penetrating protuberances 12 formed on the movable bone anchor segments 11 of the skirt portion 2) that enables the implant assembly 18 of the present invention to be conveniently receivable and secured within the naturally tapered cavity 28 of the jawbone 27 after a tooth extraction. These novel and non-obvious features of Applicant's present invention are shown in Applicant's Figs. 1, 2, 4, 4A and 7 and in new Fig. 8 and recited on Applicant's amended specification page 6, lines 1-17. Neither Lazarof '167 nor Lazarof '782 teach, disclose or suggest individually or in combination the structure that is recited in Applicant's new independent Claims 5, 17 and 18.

k. Based upon the above arguments, it would not have been obvious to one of ordinary skill in the art (1) to modify Lazarof '167 to include a seal as shown by Lazarof '782 in order to avoid contamination, (2) to use a set of beveled rings 96 and multi-sided collar 92 as merely an obvious matter of choice in the number of a known element used for a known purpose, or (3) to show that the hood at 94 that is adjacent to the multi-sided collar 92 has the largest circumference of the hood.

l. Thus, Lazarof '167 in view of Lazarof '782 fail to teach, disclose or suggest the limitations of Applicant's bipolar implant as recited in Applicant's new independent Claims 5, 17 and 18 and dependent Claims 6-16 and 19-20. Therefore, the Examiner is respectfully requested to withdraw the rejections under 35 U.S.C. Sec. §103(a) as applied to Applicant's new Claims 5-20.

2. Lazarof '167 in view of Lazarof '782 and Coatoam (Patent Pub. #2003/0087217) - 35 U.S.C. Sec. 103(a)

a. Claim 2 was rejected under 35 U.S.C. Sec. 103(a) by the Examiner as being unpatentable over Lazarof '167 in view of Lazarof '782 as applied to Claim 1 above, and further in view of U.S. Patent Publication No. US2003/0087217 of Coatoam.

b. The Examiner argued that the above combination (Lazarof '167 and Lazarof '782) does not show a hood having a removed portion. The Examiner argued that Coatoam shows a hood with a portion not present (referring to flat portions).

c. The Examiner then concluded that it would be obvious to one of ordinary skill in the art to modify the above combination to include a shape as shown by Coatoam in order to better match the shape of the bone and tissue of the implant site. The Examiner also concluded that to refer to the portion as a removed portion is merely terminology and/or method of forming which are not given patentable weight.

d. Lazarof '167 discloses a dental assembly including an implant having a tubular body portion which can be positively secured within a bore in a jawbone by an expander mechanism, and a two-piece abutment secured to the implant and having a collar which is incapable of rotation with respect thereto. Lazarof '167 also discloses that in a related process for preparing a tooth prosthesis, a transfer sleeve is utilized in a process to replicate conditions in the mouth, including the configuration of the abutment assembly, in manufacturing a custom analog. Lazarof '167 also discloses that a custom analog is cast into a stone mold to provide an exact duplicate of the mouth and from this stone mold, a crown can be manufactured in a laboratory to precisely fit in the user's mouth over a customized abutment. Finally, Lazarof '167 discloses that a treatment crown sleeve may be utilized in connection with a provisional tooth.

e. Lazarof '782 discloses an implant assembly including an elongated hollow body having a skirt which can be positively secured within a bore in a bone of a patient by an expander mechanism, and an abutment which extends from the skirt outwardly from the bore for supporting a prosthetic component. Lazarof '782 also discloses that optionally, an abutment post may be provided which has a head position adjacent to the abutment and a shank received within the hollow body. Lazarof '782 also discloses that in a related process for preparing the prosthesis, a transfer component is utilized to replicate the body portion surrounding the implant to facilitate manufacturing the prosthetic component. Lazarof '782 also discloses that in this regard, an impression is taken over the abutment with the associated transfer component, and an implant analog having the transfer component associated therewith is inserted into the impression. Finally, Lazarof '782 discloses that a stone mold is created utilizing the impression having the inserted implant analog, which stone mold is utilized to form the prosthesis.

f. Coatoam, U.S. Patent Publication No. US 2003/0087217, purports to disclose a dental implant which has an elongated body having a first and second end portion and having a root on one end portion for attaching to a patient's jawbone to replace the root of a removed tooth. Coatoam also purports to disclose that the root portion has an anatomically shaped portion between the end portions of the body for fitting into a jawbone opening below the gum tissue of a patient when the root is attached to a jawbone. Further, it is purported that an artificial tooth abutment is formed on the other end of the elongated body for attaching an artificial tooth thereon of the abutment extending above the gum line of a patient. Additionally, it is purported that a method of attaching a dental implant includes the steps of extracting a patient's tooth and selecting the dental implant of the apparatus and attaching the dental implant root with the jawbone of a patient with the abutment extending above the gum tissue of the patient and attaching the artificial tooth to the abutment.

g. Neither Lazarof '167 nor Lazarof '782 nor Coatoam, U.S. Patent Publication No. US 2003/0087217, individually or in combination teach, disclose or suggest

> An implant assembly comprising ... (1) a tapered hood, in combination with (2) a tapered tubular body adjacent to said tapered hood and including a skirt portion, said tapered hood, tapered tubular body and skirt portion forming a continuously tapered portion receivable within a naturally tapered

> cavity in a patient's jawbone after a tooth extraction, and (3) bone engaging means formed along said tapered tubular body of said continuously tapered portion and on a plurality of moveable bone anchor segments of said skirt portion, said bone engaging means for slicing into said tapered cavity for securing said tapered tubular body in said jawbone

h. Applicant's new independent Claims 5 and 18 include (1) a tapered hood 1, in combination with (2) a tapered tubular body 3 adjacent to the tapered hood 1 and including a skirt portion 2, where (3) the tapered hood 1, tapered tubular body 3 and skirt portion 2 form a continuously tapered portion 30 receivable within a naturally tapered cavity 28 in a patient's jawbone 27, and (4) bone engaging means 12, 24 formed along the tapered tubular body 3 of the continuously tapered portion 30 and on a plurality of movable bone anchor segments 11 of the skirt portion 2, where (5) the bone engaging means 12, 24 are employed for slicing into the tapered cavity 28 for securing the tapered tubular body 3 in the jawbone 27. In Applicant's new independent Claim 17, bone engaging means formed along the tapered tubular body 3 and skirt portion 2 of the continuously tapered portion 30 is further identified as a plurality of bone engaging protrusions 24 and a plurality of bone penetrating protuberances 12.

i. Each of these features recited in the immediately preceding paragraph is shown and disclosed in Applicant's amended application {in substitute specification filed under 37 C.F.R. Sec. 1.125 on March 05, 2004 via U.S. Express Mail Post Office to Addressee (U.S. Express Mail Label No. EV 261280769 US) in response to the Notice To File Missing Parts Of Non-Provisional Application (filed under 37 C.F.R. Sec. 1.53(b)) and mailed from the U.S. Patent & Trademark Office on January 05, 2004} at: tapered hood 1 in Figs. 1, 4 and 4A and at specification page 6, line 1, as filed; tapered tubular body 3 in Figs. 1, 2, 4, 4A, and 7 and specification page 6, line 12 and page 7, line 8, as filed; skirt portion 2 in Figs. 1, 2, 4, 4A, and 6 and at specification page 6, line 17, as filed; continuously tapered portion 30 in Figs. 1, 2, 4, 4A, 7, as filed, and in new Fig. 8, and at specification page 6, line 7, as amended; tapered cavity 28 and jawbone 27 are shown in new Fig. 8, and recited on specification page 6, line 4 and page 7, line 6, as filed; bone engaging means including the plurality of bone engaging protrusions 24 are shown in Fig. 2 and at specification page 6, lines 13-14, as filed, and the plurality of bone penetrating protuberances 12 are shown in Figs. 1, 2 and 4 and at specification page 7, line 19, as filed; and the plurality of movable bone anchor segments 11 are shown in Figs. 1, 4, 4A, and 6 and at specification page 7, line 18, as filed.

j. Lazarof '167 in view of Lazarof '782 and further in view of Coatoam '217 totally fail to teach, disclose or suggest these features, in combination, which are recited in Applicants' new independent Claims 5, 17 and 18.

(1) In particular, Lazarof '167 discloses a dental assembly and process for preparing a tooth prosthesis, the mechanical construction of which is clearly shown in Figs. 2 - 4 of drawing sheets 2 of 15 and 3 of 15. The cylindrical ring 90 of the dental implant 50 of Lazarof '167 is best shown in the exploded view of Fig. 2 in Lazarof '167. The cylindrical ring 90 of Lazarof '167 is clearly not tapered. At column 7 beginning with line 18, Lazarof '167 discloses that the cylindrical ring 90 has a diameter generally slightly larger than the diameter of the bore 58.

(2) Likewise, Lazarof '782 discloses an implant assembly and process for preparing a prosthetic device, the construction being disclosed in Fig.2 thereof. The cylindrical ring 110 of an implant assembly 60 is clearly shown to be cylindrical, not tapered. Further, at column 8, beginning with line 12, Lazarof '782 discloses that the abutment 108 includes a cylindrical ring 110 having a diameter generally slightly larger than the diameter of the bore 66.

(3) Coatoam '217 discloses a dental implant method and apparatus shown in Figs. 1-2 and 8-10. On page 3, paragraph 0025, lines 1-6, Coatoam '217 refers to Fig. 1 and discloses that his dental implant has a cylindrical body 100 and an anatomically shaped proximal end 101, has nearly parallel walls 102, and has an integrated anatomically shaped abutment base 103 formed as part of the implant and not a separate attachment. Beginning with line 2 on the right column of page 3, Coatoam '217 notes that the parallel walls 102 comprise the collar of the implant, a component corresponding to the hood 1 of the implant assembly 18 of the present invention. The anatomically shaped proximal end 101 is disclosed as being triangular, ovoid, rectangular or circular shaped on page 3, paragraph 0026, lines 1-4.

(4) Thus, based upon the previous three paragraphs (1-3), neither the cylindrical ring 90 of Lazarof '167 nor the cylindrical ring 110 of Lazarof '782 nor the parallel walls or collar 102 or cylindrical body 100 or anatomically shaped proximal end

101 of Coatoam '217 discloses a tapered hood as is clearly shown and described in Applicant's new independent Claims 5, 17 and 18.

(5) Lazarof '167 also discloses a dental implant tubular body 56 and a skirt portion 66 shown in Fig. 2 thereof. The tubular body 56 of Lazarof '167 is clearly shown as being cylindrical, not tapered. The tubular body 56 and skirt portion 66 are discussed in the Lazarof '167 disclosure at column 6 beginning at line 53 to column 7, line 17, and nowhere are these components described as being tapered.

(6) Lazarof '782 also discloses an elongated hollow body 64 and a skirt portion 76 clearly shown in Fig. 2 thereof. The elongated hollow body 64 of Lazarof '782 (as with the tubular body 56 of Lazarof '167) is clearly shown to be cylindrical, not tapered. The elongated hollow body 64 and skirt portion 76 are discussed in the Lazarof '782 disclosure beginning at column 7, line 13 through column 8, line 41, and nowhere are these components described as being tapered.

(7) Coatoam '217 discloses in Figs. 1-2 and states on page 3, paragraph 0025, lines 1-4 that the dental implant comprises a cylindrical body 100 and parallel walls 102 which comprises the collar of the implant (page 3, paragraph 0025, right column, lines 2-3).

(8) Consequently, neither Lazarof '782 nor Lazarof '167 nor Coatoam '217 discloses a tapered hood, tapered tubular body and skirt portion that forms a continuously tapered portion which is designed to be received within a naturally tapered cavity in a patient's jawbone as is recited in Applicant's new independent Claims 5, 17 and 18.

(9) Lazarof '167 discloses a plurality of bone penetrating protuberances 86 formed along the cylindrical, elongated tubular body 56 and cylindrical skirt portion 66 as is clearly shown in the exploded view of Fig. 2 and described at column 7 beginning with line 4 of Lazarof '167. The bone penetrating protuberances 86 are formed on the exterior surface of the cylindrical, elongated tubular body 56 and skirt portion 66 as clearly shown in Fig. 2 of Lazarof '167.

(10) Lazarof '782 also discloses a plurality of bone penetrating protuberances 104 formed along the cylindrical, elongated tubular body 64 and cylindrical skirt portion 76 as is clearly shown in Fig. 2 and discussed at column 7, lines 61-67.

(11) Coatoam '217 discloses a cylindrical body 100 (see page 3, paragraph 0025, line 2) with no protrusions, protuberances or the like as is clearly shown in Figs. 1 and 2. Additionally, Coatoam '217 also discloses that the implant may have various grooves, threads or fins 104 (see page 3, paragraph 0025, line 32). However, the grooves, threads or fins 104 are not located on the cylindrically body 100 as is clearly shown in Fig. 1 of Coatoam '217.

(12) Consequently, neither Lazarof '782 nor Lazarof '167 nor Coatoam '217 discloses bone engaging means including bone engaging protrusions formed along the tapered tubular body of the continuously tapered portion and bone penetrating protuberances formed on the moveable bone anchor segments of the skirt portion for slicing into the naturally tapered cavity for securing the tapered tubular body in the jawbone as recited in Applicant's new independent Claims 5, 17 and 18.

k. It is the continuously tapered portion 30 (comprised of the tapered hood 1, tapered tubular body 3 and skirt portion 2) with the bone engaging means (i.e., the bone engaging protrusions 24 formed along the tapered tubular body 3 of the continuously tapered portion 30 and the bone penetrating protuberances 12 formed on the movable bone anchor segments 11 of the skirt portion 2) that enables the implant assembly 18 of the present invention to be conveniently receivable and secured within the naturally tapered cavity 28 of the jawbone 27 after a tooth extraction. These novel and non-obvious features of Applicant's present invention are shown in Applicant's Figs. 1, 2, 4, 4A and 7 and in new Fig. 8 and recited on Applicant's amended specification page 6, lines 1-17. Neither Lazarof '167 nor Lazarof '782 nor Coatoam '217 teach, disclose or suggest individually or in combination the structure that is recited in Applicant's new independent Claims 5, 17 and 18.

l. Based upon the above arguments, it would not have been obvious to one of ordinary skill in the art to modify the above combination to include a shape as shown by Coatoam in order to better match the shape of the bone and tissue of the implant site or to refer to the portion as a removed portion which is merely terminology and/or method of forming since it is not given patentable weight.

m. Thus, Lazarof '167 in view of Lazarof '782 and further in view of Coatoam '217 fail to teach, disclose or suggest the limitations of Applicant's bipolar implant as recited in Applicant's new independent Claims 5, 17 and 18 and dependent

Claims 6-16 and 19-20. Therefore, the Examiner is respectfully requested to withdraw the rejections under 35 U.S.C. Sec. §103(a) as applied to Applicant's new Claims 5-20.

IV. CONCLUSION:

1. In light of the above analysis, the cited references neither individually under 35 U.S.C. §102 nor in combination under 35 U.S.C. §103(a) teach, disclose or suggest the invention as recited in Applicants' new Claims. The new Claims are set forth in a marked-up version herein, as required by 37 C.F.R. Sec. 1.121 effective as of July 30, 2003. Thus, new independent Claims 5, 17 and 18 and the claims dependent therefrom, i.e., Claims 6-16 and 19-20, should be allowed and such action is earnestly solicited.

2. The prior art made of record (Lazarof '167, Lazarof '782 and Coatoam Publication No. US 2003/0087217) has been thoroughly reviewed and has not been found to anticipate or make obvious the new Claims 5-20.

3. The Examiner is invited and encouraged to initiate a telephone conference with Applicant's attorney at the telephone number listed below if the Examiner believes that such a conference would expedite allowance of the pending claims. Telephone calls may be directed to John S. Christopher at (213) 580-7963.

Respectfully submitted,
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